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[Continued on next page]

- (54) Title:** POLYPEPTIDE PARTICIPATING IN PYRIDOXINE BIOSYNTHESIS, A POLYNUCLEOTIDE CODING THE POLYPEPTIDE AND THOSE USES

At5g10410	-----MEG---TGVVAVYVNGGAITEAK-KSPFSVKVGLAQLMRGGVIMDVVNAEQARIAEE	52
At2g38230	-----MAG---TGVVAVYVGGAMTETKQKSPFSVKVGLAQLMRGGVIMDVVNAEQARIAEE	53
At3g16050	MADQMADTDQDQAVTLYSGATITDAKKNHPSFKVGLAQLVRGLGATVEVSSVNAQKRLAES	60
snz3	-----MS-----EFKVKLTGLAQLMKGGVIMDVVTPPEQAI1AER	33
snz2	-----MS-----EFKVKLTGLAQLMKGGVIMDVVTPPEQAI1AER	33
snz1	-----MTG-----EDFKIKSGLAQLMKGGVIMDVVTPPEQAK1AEK	35

At5g10410	AGACAVMALERVADIRAGGGVARMSPDMQIKEIKQAVTIPVMAKARIGHFVEAQILEAI	112
At2g38230	AGACAVMALERVADIRAGGGVARMSPDEMIKEIKMAVTIPVMAKARIGHFVEAQILEAI	113
At3g16050	AGACSVIYSD----PVRSRGGVRMPDPIKIVKRVASVPVMAARVGHFVEAQITLSL	114
snz3	AGACAVMALERIPADMRKSGGVCVRMSDPRMKEIMEASVIPMAKVRIGHFVEAQILEL	93
snz2	AGACAVMALERIPADMRKSGGVCVRMSDPRMKEIMEASVIPMAKVRIGHFVEAQILEL	93
snz1	SGACAVMALESIPADMRKSGGVCVRMSDPMKKDIMSYSIPVMAKVRIGHFVEAQITL	95

At5g10410	GIDYIDSEVLTLADEDDHHKHNKFRIPVFCGRNLGEALRRIREGAAMIRTKG-EAGTG	171
At2g38230	GVDYVDESVLTLADEDDHHKHNKFIFFVCGCRNLGEALRRIREGAAMIRTKG-EAGTG	172
At3g16050	AVDYIDSEIIISVADDDHPFNKHNFRSPFCGRDTGEALRRIREGAAMIRIQDGLTATG	173
snz3	QVDYIDSEVLTPADWTHHIEKHNKFVFFVCGAKDLGEALRRIREGAAMIRTKG-EAGTG	152
snz2	QVDYIDSEVLTPADWTHHIEKHNKFVFFVCGAKDLGEALRRIREGAAMIRTKG-EAGTG	152
snz1	EVDYIDSEVLTPADWTHHIEKDKFVFFVCGAKDLGEALRRIREGAAMIRTKG-EAGTG	154

At5g10410	NIIIEAVRHVRVSYNGDIRVLRN--MDDVEVFTFAKKLAAPYDLVMQTKQLGRLPVQVFAAG	229
At2g38230	NVVEAVRNVHVRVSYNGAIRLLRS--MDDVEVFTFAKKIAPYDLVQTKELGRLPVQVFAAG	230
At3g16050	NIETVKNVRSLSMGEVRLVLRN--MDDVEVFTFAKKISAPYDLVAQTKVMGRVPVQVFAAG	234
snz3	DVSEAVKHITIKAEIQYQYKENLKTESDFAAKATELRPVVDLLKTTLSEGLKLPVNVFAAG	212
snz2	DVSEAVKHITIKAEIQYQYKENLKTESDFAAKATELRPVVDLLKTTLSEGLKLPVNVFAAG	212
snz1	DVSEAVKHIRRITEETIKACQO-LKSEDDIAKVAEMRPVPSLLKVDYLEGKLPVNVFAAG	213

At5g10410	GVATPADAALMLMQLGCDGVFVGSIGFVKSQDFARRARAIQVAVTHYSDEPMLVEVSSCGLGE	2899
At2g38230	GVATPADAALMLMQLGCDGVFVGSIGFVKSQDFARRARAIQVAVNRYDAALVAEVSQGLGE	2900
At3g16050	GITTPADAALMLMQLGCDGVFVGSFVDPDPDFKKLRAIQVAVQOHYNDPHLVAEMSSGLEN	2948
snz3	GVATPADAALMLMQLGCEGVFVGSIGFKSSDFPEKLCAIAVEATTHYNDPAKLLLVSSDLDG	2722
snz2	GVATPADAALMLMQLGCEGVFVGSIGFKSSDFPEKLCAIAVEATTHYNDPAKLLLVSSDLDG	2722
snz1	GVATPADAALMLMQLGCDGVFVGSIGFKSSNPVRLATAVVEATTHFNDPKLLLEVSSDLDG	2733

At5g10410	AMVGINLNDEKVERFANRSE-----	309
At2g38230	AMVGLNLDD-KVERFASRSE-----	309
At3g16050	AMESLNVGRBRIQDFGQGSV-----	314
snz3	LMGGISIQSINEAGGKNGARLSEIGW	298
snz2	LMGGISIQSINEAGGKNGARLSEIGW	298
snz1	LMGGVSIESIASHS--NGVRISEIGW	297

**(57) Abstract:** The present invention discloses a polypeptide participating in pyridoxine biosynthesis, a polynucleotide coding the polypeptide and those uses. Particularly, this present invention discloses a polypeptide participating in pyridoxine biosynthesis, a polynucleotide coding the polypeptide, a method for inducing plant growth inhibition, a method for screening a compound inducing plant growth inhibition, and composition for inducing plant growth inhibition which comprises the compound obtained by the screening method.



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